

# The Innovation Pipeline



## IPEX and 3D Innovation

3D printers are not solely reserved for science labs. Today, they are in the front-line of OEM customer service and product development. Since acquiring two 3D printers in 2015, IPEX has found many ways to use them that have had a positive impact in helping OEM partners accelerate their product development process while significantly reducing development costs. Here are just two of those innovative uses.

## 3D Solution to Condensate Trap Design

An international manufacturer of high-efficiency boilers and water heaters, was in the product development process for a new boiler when the designers realized that an off-the-shelf condensate trap would not work with their design. IPEX was approached for help and had a 6-month window to provide new personalized condensate traps for the product launch.



An optimization study, including a Mold Flow Analysis, showed that IPEX could move forward with confidence to meet the deadline. A time- and cost-saver was using simulated ABS resin in the Fused Deposition Modelling printer, producing a component that could withstand temperatures up to 226°F (108°C). Using this resin, IPEX was able to create a prototype that could be installed, tested and certified with the appliance by the customer. If changes were required, IPEX could respond within days instead of weeks with the necessary changes. This alternative to a costly prototype mold saved the customer thousands in tooling costs. The project time was reduced by approximately eight weeks and IPEX delivered production parts before the 6-month deadline.

# IPEX 3D Service Advantages



Time Saving



Money Saving



Product  
Customization

## Developer Escapes Costly Penalties with IPEX 3D Problem-Solving

A major manufacturer of condensing, tankless water heaters, was working with a developer on a 6-storey condominium. Unfortunately, the developer used the spacing requirement specifications for a termination product that was not certified for use with the tankless water heater. To use certified IPEX low-profile termination units, the developer would have to spend tens of thousands of dollars to break the building facade and correct the spacing, which would result in costly delay penalties. The other option was to work with IPEX to certify and manufacture a low-profile termination unit using new custom spacing specifications. 3D-printed parts were created to verify dimensions and to be used for the necessary certification by the appliance manufacturer. Using this process, product development time was reduced by approximately ten weeks and the developer met the closing deadline.



IPEX low-profile termination units with custom 3D specifications are on the building facade.

IPEX strives to stay at the forefront of advancing technologies in North America and to continue its high standard of customer service and product excellence. IPEX's new 3D service has been proven to help customers problem-solve and develop new products while saving both time and money.

As the leader in thermoplastic piping systems, IPEX designs and manufactures the largest, most recognized and diverse range of integrated piping products – Everything professionals need to manage the full spectrum of today's municipal, industrial, commercial and residential challenges.